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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,961	06/14/2007	Roger Clyde Webb	HH4289US (#90343)	9720

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EXAMINER	
CHUKWURAH, NATHANIEL C	
ART UNIT	PAPER NUMBER
3721	
MAIL DATE	DELIVERY MODE
02/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,961	WEBB, ROGER CLYDE	
	Examiner	Art Unit	
	NATHANIEL C. CHUKWURAH	3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/30/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 8 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsu et al.(US 4,773,581) in view of Wolf et al. (US2004/0134961).

With regard to claim 1, Ohtsu discloses a fastener driving tool comprising: a tool nose (4); a loading apparatus (7) for introducing the fastener into said tool nose; a gas combustion mechanism as shown in Figure 1, comprising a first priming cylinder (1), an air intake (see air supply 9) and a first valve apparatus (not shown) for fluidically connecting the air intake to a second delivery cylinder (2) having a second piston (3), the first priming cylinder fluidically connected to a fuel gas reservoir via a second valve apparatus (not shown), wherein the first priming cylinder (1) receives fuel gas from the fuel gas reservoir and air through the air intake to form an air/fuel gas mixture therein.

Ohtsu discloses the claimed subject matter to the degree that it does not show the first piston performing compression operation of air/fuel gas mixture.

Wolf teaches a fastener driving tool including first priming cylinder (29) having a first piston (30) capable of compressing and transferring gas/air mixture to the combustion chamber, and valves (25, 26 Fig. 1). In view of the teaching Wolf, it would have been obvious t one skilled

in the art to modify Ohtsu's first cylinder with Wolf's teaching in order increase the compression and combustion rate of the gas/air mixture to propel the drive rod.

With regard to claim 2, Ohtsu's modified first piston (30 Wolf) is mechanically actuated.

With regard to claim 3, modified Ohtsu's the second valve apparatus (see valves 25, 26 Wolf) is opened and closed via mechanical actuation.

With regard to claim 4, modified Ohtsu's first piston (30 Wolf) is capable of being electromagnetically actuated.

With regard to claim 5, modified Ohtsu's second valve apparatus is capable of being opened and closed via electromagnetic actuation.

With regard to claim 6, modified Ohtsu's fastener driving tool is a nail gun as shown in Figure 2.

With regard to claim 8, modified Ohtsu shows a bumper (25) disposed near the bottom of the second delivery cylinder (2), the bumper being compressible by the second piston (3) in the bottom of the travel of the second piston and wherein the subsequent restoration of the bumper forcibly returns the second piston back up the second delivery cylinder.

With regard to claim 11, modified Ohtsu further comprises a sealing ring (21) having a semi-flexible lip and being disposed around the periphery of the second piston.

With regard to claim 12, modified Ohtsu shows a high tension generator (11) which is considered to include a mixing fan (not shown) rotatably mounted to the interior of the delivery cylinder. Further, mixing fan in interior chamber of combustion fastening tool is well known in the art.

With regard to claim 13, modified Ohtsu's high tension generator (11) which is considered to include an externally mounted motor (not shown) drives the mixing fan and capable of driving the motor via magnetic coupling.

With regard to claim 14, modified Ohtsu's fastener tool further comprises a valve (31, 32) considered to include a plate valve and an exhaust plenum (27), wherein the plate valve fluidly connects the second delivery cylinder (2) with the exhaust plenum when the plate valve is opened for exhausting the second delivery cylinder.

With regard to claim 15, Ohtsu discloses an apparatus utilising a gas combustion mechanism for propulsion of an object (Fig. 2), the gas combustion mechanism comprising a first priming cylinder (1) and an air intake (see air supply device 9) fluidically connected via a first valve apparatus (not shown) to a second delivery cylinder having a second piston (3), the first priming cylinder (1) fluidically connected to a fuel gas reservoir via a second valve apparatus (not shown), wherein the first priming cylinder (1) receives fuel gas from the fuel gas reservoir (8) and air through the air intake (9) to form an air/fuel gas mixture.

Ohtsu discloses the claimed subject matter to the degree that it does not show the first piston performing compression operation of air/fuel gas mixture.

Wolf teaches a fastener driving tool including first priming cylinder (29) having a first piston (30) capable of compressing and transferring gas/air mixture to the combustion chamber, and valves (25, 26 Fig. 1). In view of the teaching Wolf, it would have been obvious t one skilled in the art to modify Ohtsu's first cylinder with Wolf's teaching in order increase the compression and combustion rate of the gas/air mixture to propel the drive rod.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsu et al. in view of Wolf et al. as applied to claim 1 and further in view of Wandel et al. (US 3,809,307).

With regard to claim 7, modified Ohtsu discloses the claimed subject matter to the degree that it does not show the latching apparatus for engaging the driver rod.

Wandel teaches a nosepiece including a latch for preventing the movement of the driver blade prior to operating the tool. In view of the teaching of Wandel, it would have been obvious to one skilled in the art to modify Ohtsu by providing the latch in order to prevent the movement of the drive blade prior to operating the tool.

4. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsu et al. in view of Wolf et al. as applied to claim 1 and further in view of Golsch (US 4,932,480).

With regard to claim 9, Ohtsu discloses the claimed subject matter to the degree that it does not show the interior of the bumper forms a chamber for porting pressurised air via an outlet valve through a transfer channel to the first priming cylinder as he bumper is compressed.

Golsch teaches such feature as bumper with a chamber for porting pressurised air, see Figures 2-5. Therefore, it would have been obvious to a skilled artisan to provide Ohtsu's tool with a bumper with a chamber for porting pressurised air in order to exhaust the chamber of residue air.

With regard to claim 10, first piston of the modified Ohtsu has an internal receiver (9) for storing the pressurised air.

Conclusion

5. Refer to attachment for notice of references cited and recommended for consideration based on their disclosure of limitations of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANIEL C. CHUKWURAH whose telephone number is (571)272-4457. The examiner can normally be reached on M-F 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathaniel C. Chukwurah/
Examiner, Art Unit 3721

/Rinaldi I Rada/
Supervisory Patent Examiner, Art Unit 3721

2/11/2009